



VRS Overview

Commission on Employee Retirement Security and Pension Reform

Presented by: Patricia Bishop, VRS Director
September 18, 2017



Implementation of 2017 Legislation

House Bill 1768

- Conduct and report stress testing on a regular basis
 - ✓ VRS already regularly conducted stress tests and sensitivity analyses
 - ✓ VRS Board adopted formal stress testing policy in June 2017
 - ✓ VRS published stress testing report in June 2017
- Provide online investment policy statement and report up to 25-year returns
 - ✓ VRS already provided investment policy statement online, along with one-year to 25-year returns net of fees and gross of fees
 - ✓ VRS provided similar information in its CAFR
- Report carried interest fees
 - ✓ VRS continues to gather carried interest fee data and expects to report aggregate carried interest data by the end of calendar year 2017



Findings of Stress Test and Sensitivity Analysis Report

Stress Test and Sensitivity Analysis



VRS provided a report in June 2017 that contained the following information:

- Pension Funding Basics
- Historical Review – 25-year lookback
- Future Risk Analysis

The full report can be accessed at:

<http://www.varetire.org/stresstest>

Future updates are expected to be delivered with actuarial valuation results at year end.



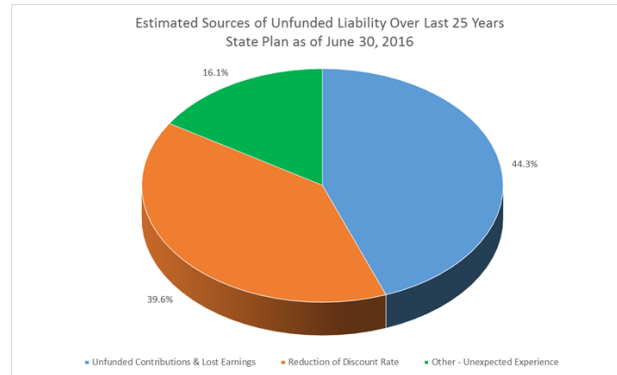
VRS Stress Test and Sensitivity Analysis

Report to the General Assembly of Virginia

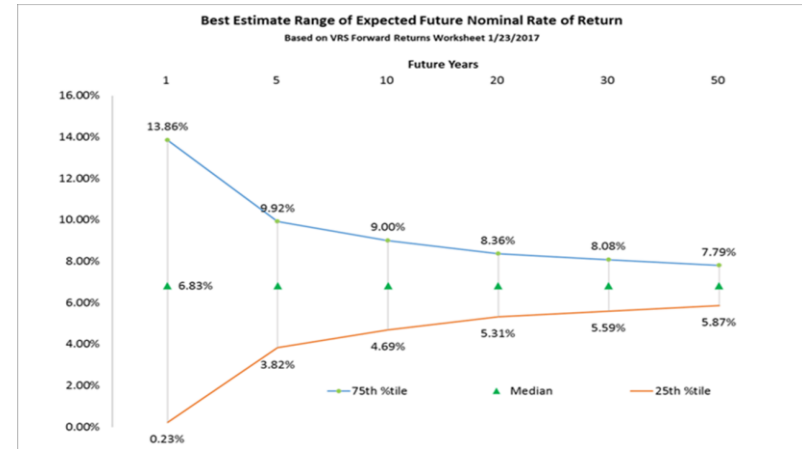
Stress Test and Sensitivity Analysis



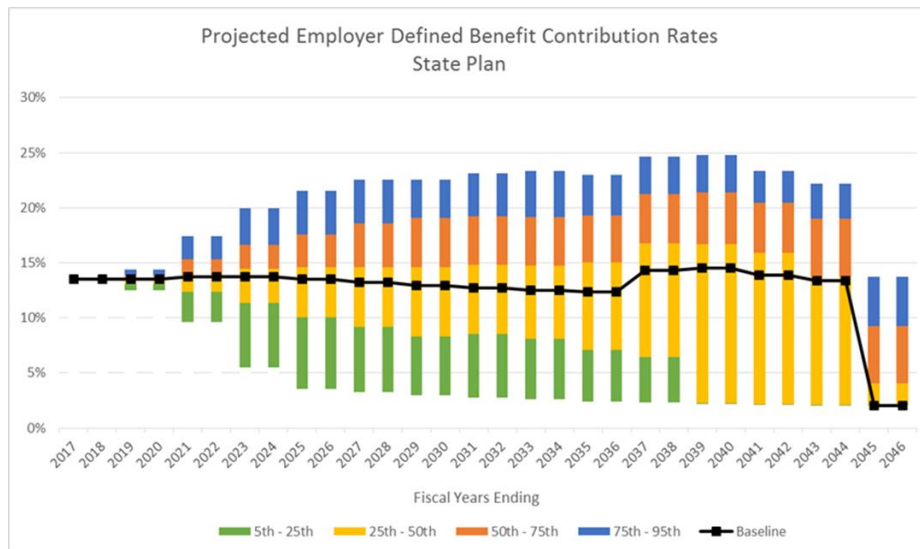
Historical Review



Future Risk Analysis



Stochastic Modeling



Sensitivity Analysis

Discount Rate	7.00%	6.75%	6.50%
Total Normal Cost Rate	9.30%	9.79%	10.31%
Member Contribution Rate	4.69%	4.69%	4.69%
Employer Normal Cost Rate	4.61%	5.10%	5.62%
Administrative Expense Load	0.26%	0.26%	0.26%
Total Employer Normal Cost Rate	4.87%	5.36%	5.88%
Amortization Rates for Unfunded Liabilities			
Legacy Unfunded	10.88%	10.59%	10.31%
2014 Gain	-0.79%	-0.77%	-0.76%
2015 Gain	-1.17%	-1.15%	-1.13%
2016 Gain	-0.16%	-0.15%	-0.15%
Experience Study	0.11%	0.11%	0.11%
Change in Discount Rate	0.00%	1.12%	2.25%
Payback Rate	0.00%	0.00%	0.00%
Total Amortization Rate	8.87%	9.75%	10.63%
Total Employer Rate	13.74%	15.11%	16.51%
Increase Rate	0.00%	1.37%	2.77%
Estimated Increase in Annual Funding		54.8 Million	110.9 Million
General Fund		23.4	47.4
Non-General Fund		31.4	63.5
Unfunded Liability	\$6.3 Billion	\$6.9 Billion	\$7.6 Billion
Funded Status	72.7%	70.7%	68.7%

- Investment policy has met its long-term target rate of return over the past 25 years providing an average 8.3% return.
- Over the past 25 years pension contributions, on average, have been 25-30% less than what was actuarially required.
- Statewide plans will have higher than normal contribution rates until the legacy unfunded liability is paid off.
- Pension reforms have:
 - Lessened potential future liabilities
 - Introduced risk sharing with new members
 - Accelerated repayment of deferred contributions
 - Required payment of actuarially determined contributions
 - Provided mechanism to improve pension funded status



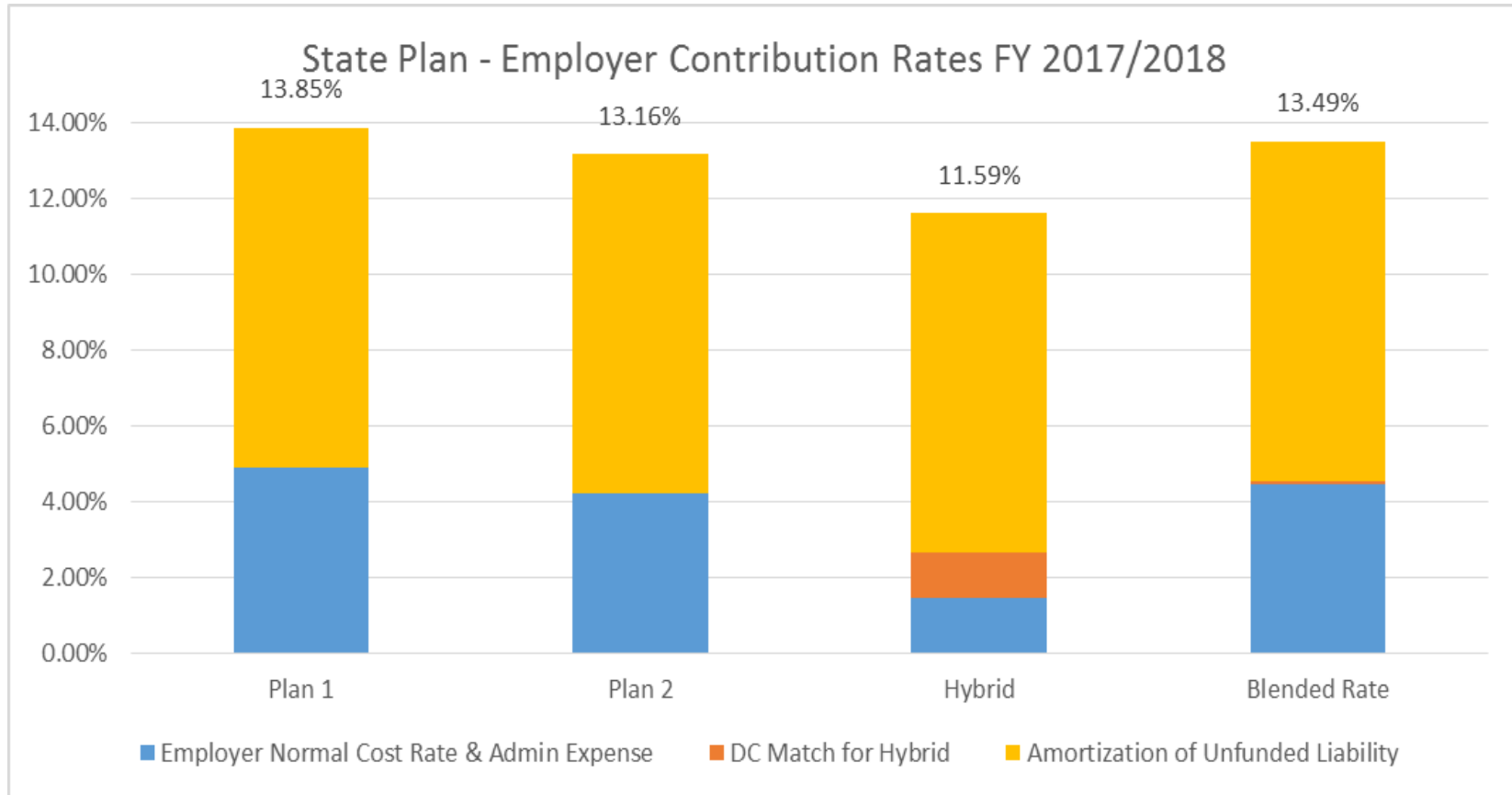
Hybrid Retirement Plan Features and Tools

Hybrid Retirement Plan



- Total combined balance in the Hybrid 401(a) Cash Match Plan and the Hybrid 457 Deferred Compensation Plan is \$193 million
- Due to auto-escalation there are now 51,438 hybrid members making voluntary contributions, or 75.4%
 - Of those, 14,004 hybrid members actively elected a voluntary contribution

Impact of Pension Reform on Plan Costs

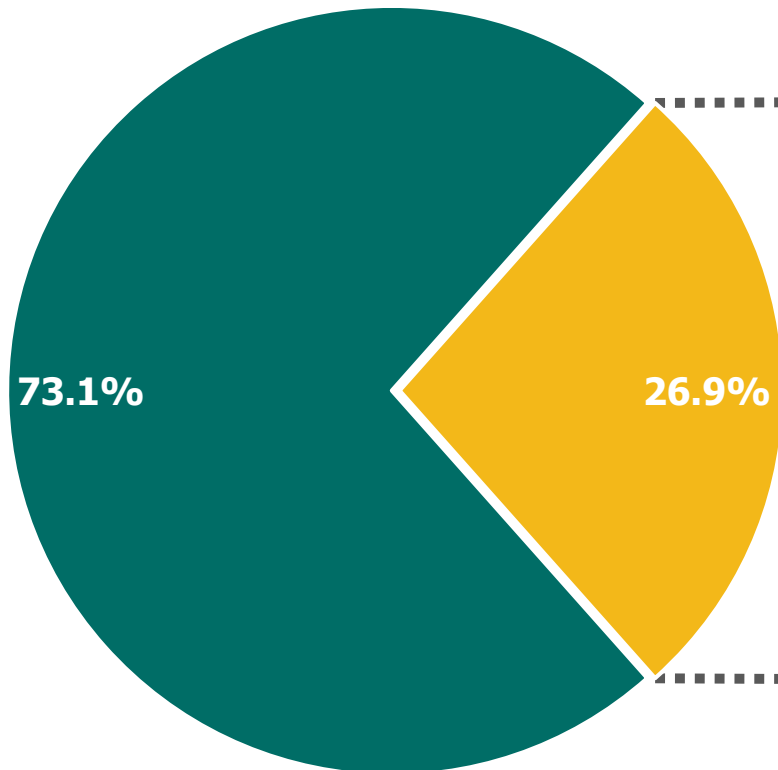


- Amortization of unfunded liability represents over two-thirds of employer costs.
- Hybrid Retirement Plan costs, including employer match to DC component, lower than Plan 1 or Plan 2.

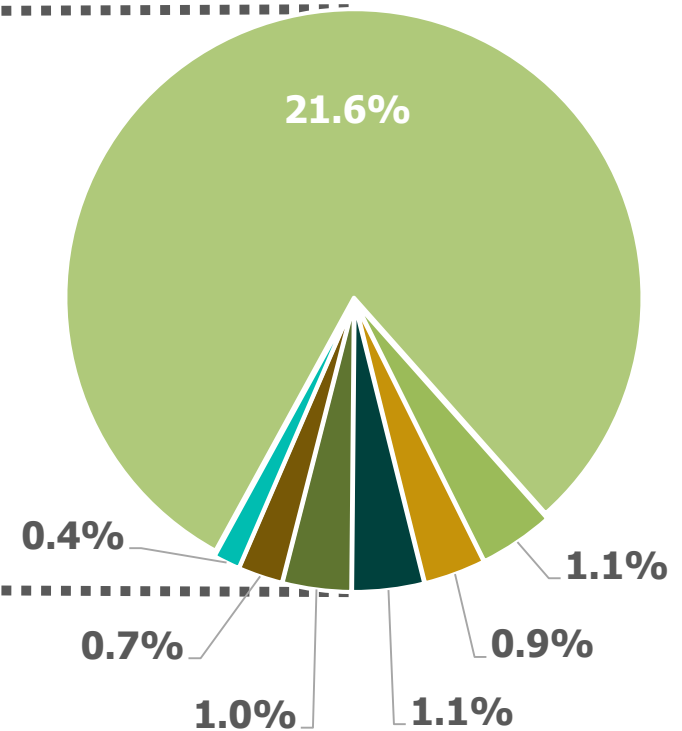
Hybrid 457 Plan – Voluntary Contributions



Active members who have a voluntary contribution as of June 15, 2017



Active members with a voluntary contribution greater than 0.5%



Voluntary Contribution Percentages

■ 0.50% ■ 1.00% ■ 1.50% ■ 2.00% ■ 2.50% ■ 3.00% ■ 3.50% ■ 4.00%

Helping members plan for tomorrow, today.

- ✓ **Auto-Escalation** – Implemented January 1, 2017; only 3.1% of members opted out
- ✓ **SmartStep** – Allows Hybrid Retirement Plan members to auto-escalate at a time they choose
- ✓ **Enhanced Active Choice** – Provides messaging to members to encourage action

Introducing SmartStep!

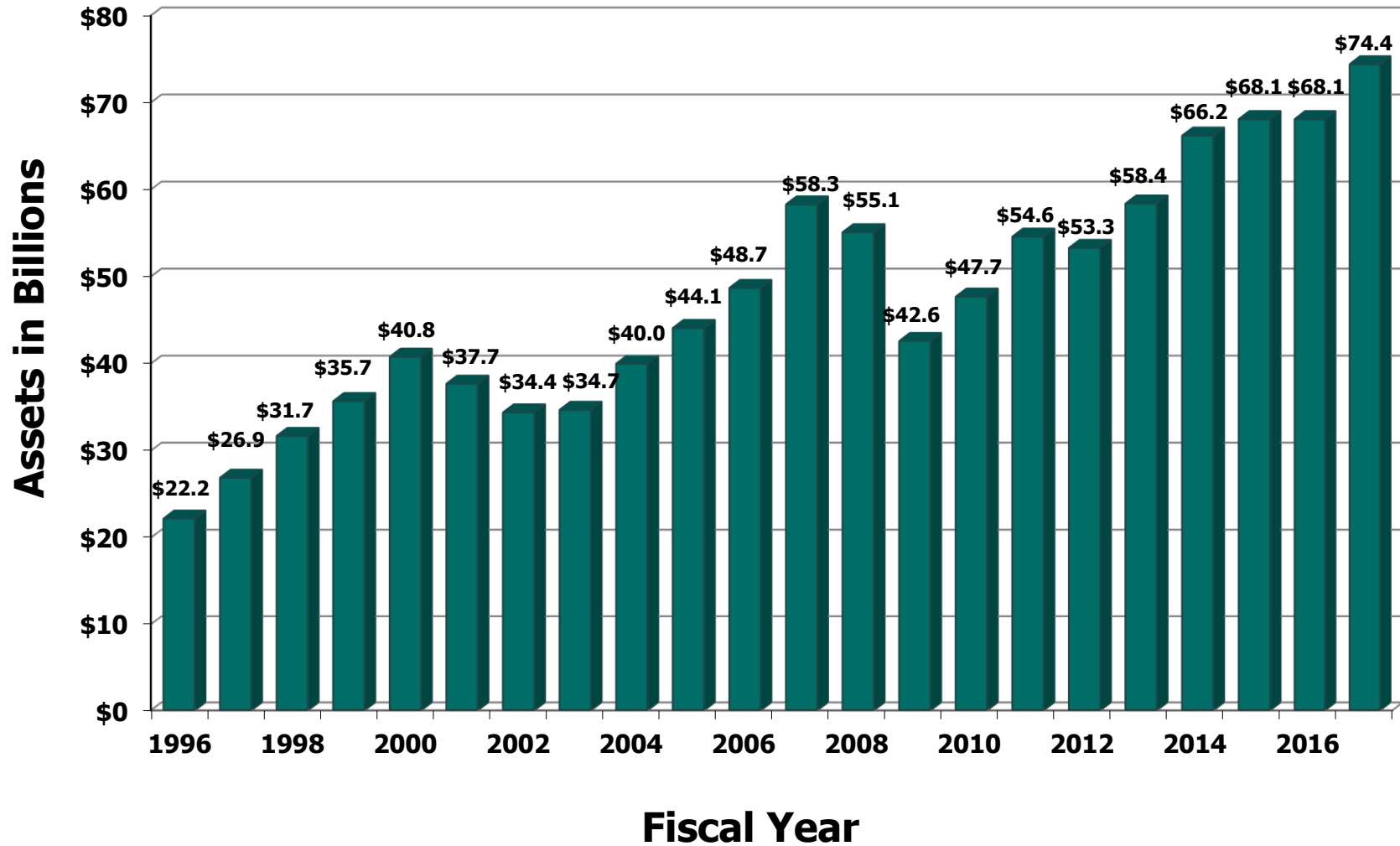


- SmartStep helps members save more for retirement by allowing them to set annual increases to their voluntary contributions.
- SmartStep helps members reach the maximum contribution at their own pace.
- Once members choose SmartStep, they do not have to log in to increase the contribution each year. SmartStep does the work!
- The more members save, the more they receive in matching employer contributions, benefiting from compounding of interest over time.

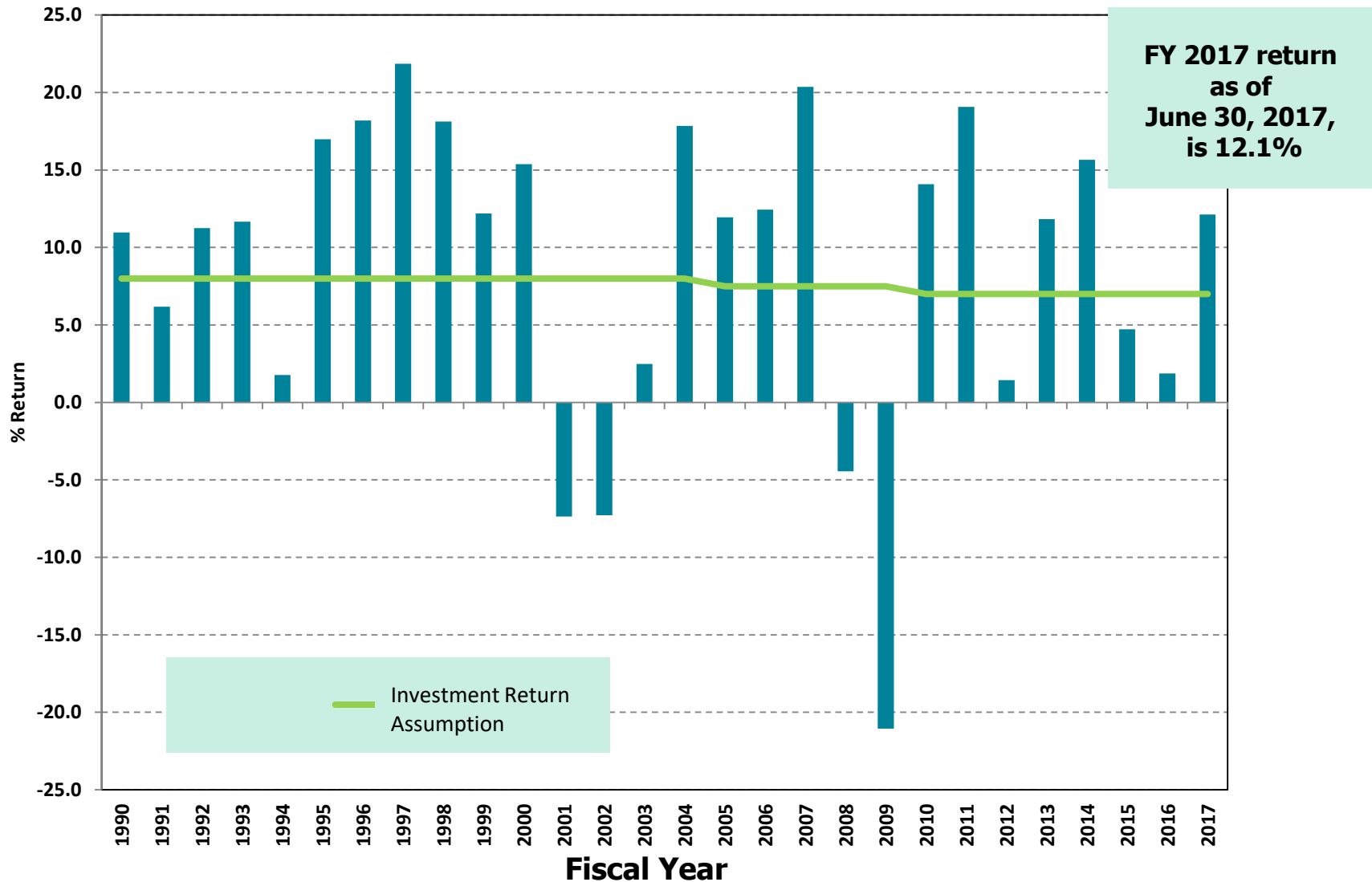
SMARTSTEP



INVEST



VRS Fiscal Year Returns



Fund Performance (Net of Fees)



	VRS Return (As of June 30, 2017)
1-year	12.1%
3-year	6.2%
5-year	9.1%
10-year	4.9%
15-year	7.5%
20-year	7.0%
25-year	8.3%

Source: Bank of New York Mellon



Legacy Unfunded Liabilities

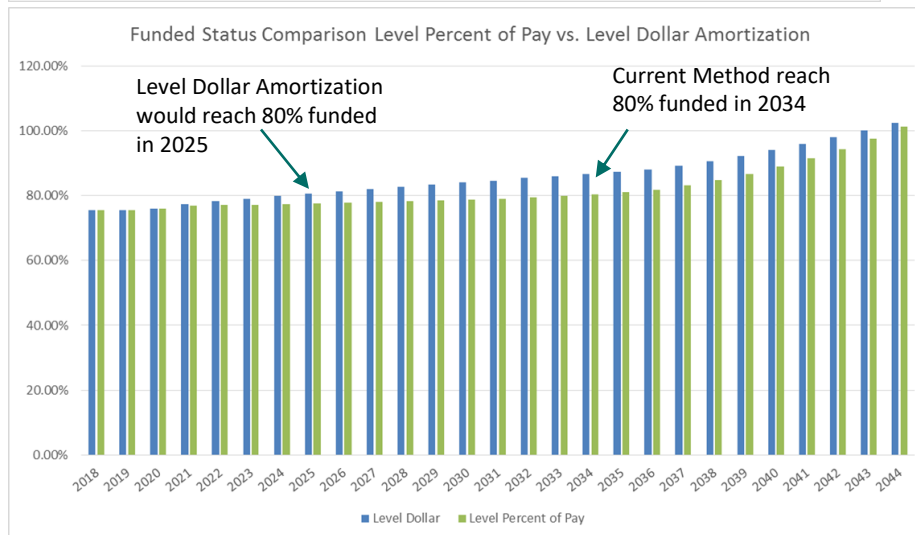
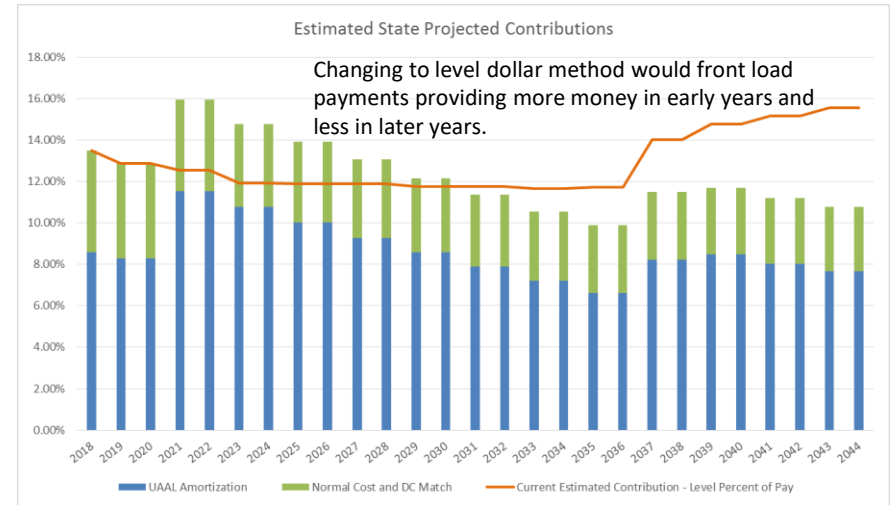
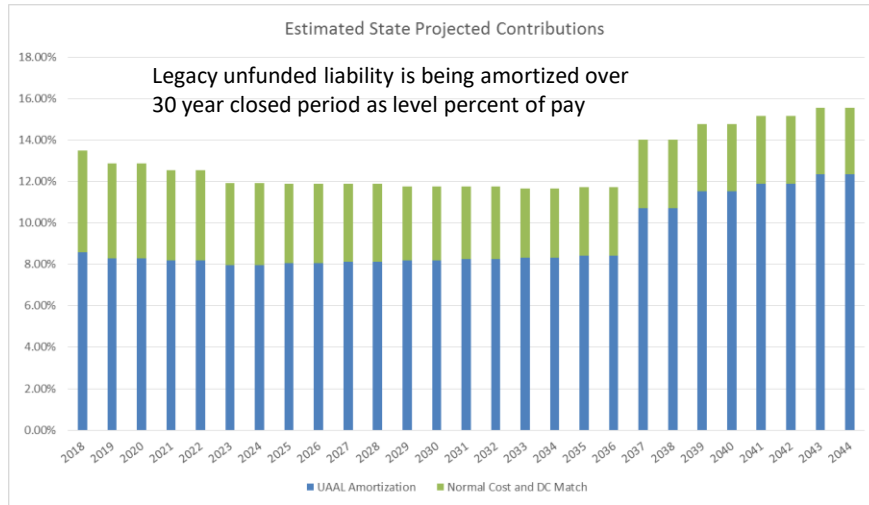
Strategies Used by Other States to address Unfunded Pension Liabilities



- **Level Dollar Closed Amortization**
 - Arizona, Connecticut, Georgia, Indiana, Iowa, Louisiana, Michigan, North Carolina, Pennsylvania, Tennessee, West Virginia
- **Maintain rates higher than actuarially determined rate**
 - Rhode Island, South Dakota
- **Dedicated funding source** (i.e., portion of specific taxes, gaming revenues)
 - Arizona, Kansas, Oklahoma, Pennsylvania
- **Modifying statute to allow state surplus/sale of state assets to go towards pension funding**
 - Oklahoma, Hawaii, Louisiana, Montana, Kansas

Legacy Unfunded Liabilities – Alternate Amortization Method

- Legacy unfunded liability is currently amortized over 30-year period as level percent of pay.



State Plan Unfunded Liabilities

(\$Billions)

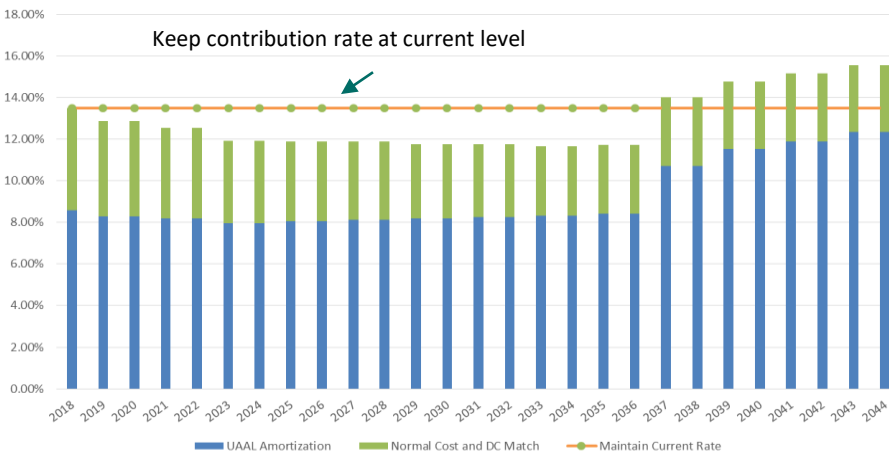
Current Amortization		Level Dollar	
Year	Unfunded Liability	Year	Unfunded Liability
2017	\$5.99	2017	\$5.99
2025	\$5.93	2025	\$5.14
2035	\$5.09	2035	\$3.40
2045	\$0	2043	\$0

Legacy Unfunded Liabilities – Impact of Maintaining Higher Rate

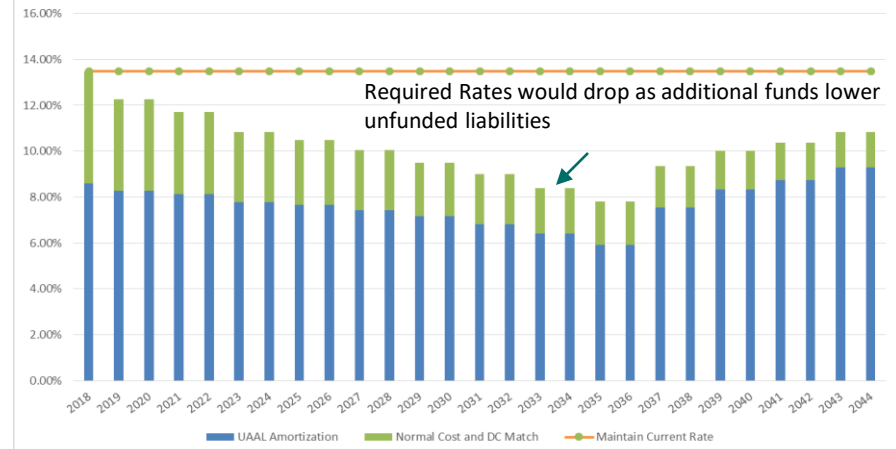


- Maintaining higher contribution level until plan funded status improves could help lower future contribution payments and improve funded status.

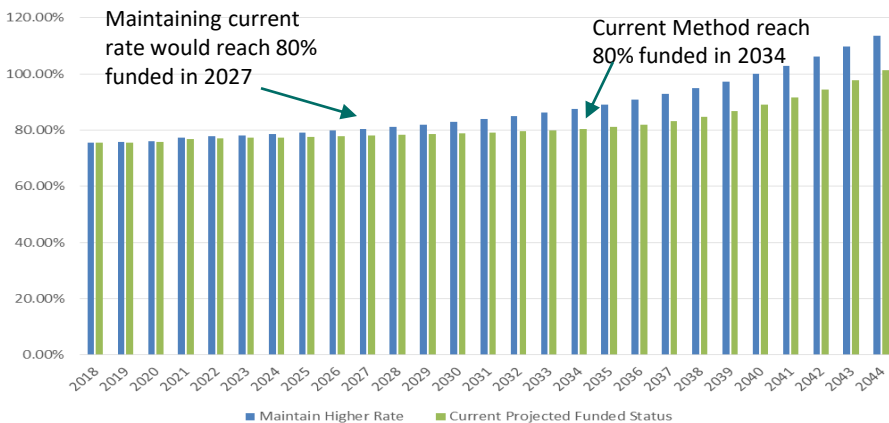
Estimated State Projected Contributions



Estimated State Projected Contributions



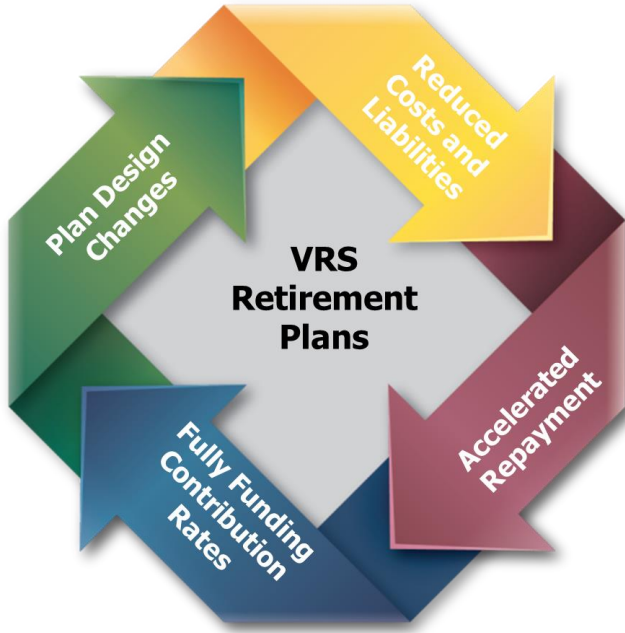
Funded Status Comparison
Current Method vs. Maintaining Higher Rate



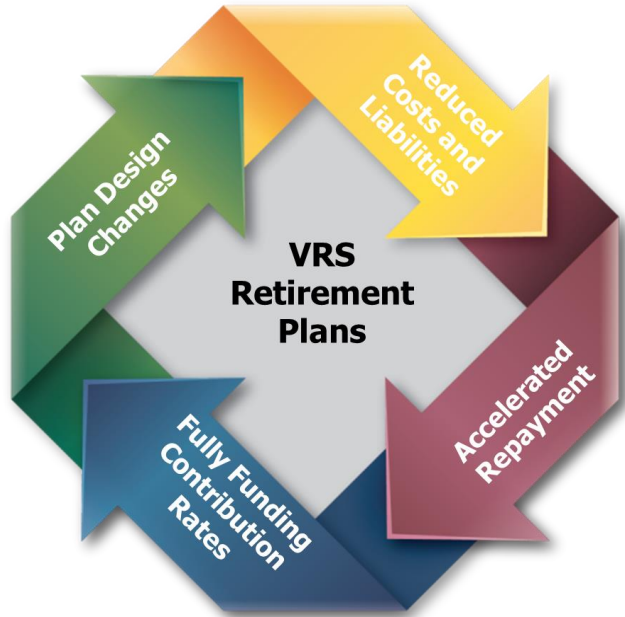
State Plan Unfunded Liabilities

(\$Billions)

Current Amortization		Maintain Higher Rate	
Year	Unfunded Liability	Year	Unfunded Liability
2017	\$5.99	2017	\$5.99
2025	\$5.93	2025	\$5.50
2035	\$5.09	2035	\$2.93
2045	\$0	2040	\$0



- Pension reforms have effectively addressed the cost of benefits
- Hybrid Retirement Plan introduced risk sharing with employees and reduced potential for future unfunded liabilities
- Savings from pension reforms will be fully realized in the future as the hybrid plan becomes the dominant plan
- Legacy unfunded liability being amortized over closed 30-year period with 26 years remaining
- Future liabilities amortized over 20-year closed periods



- Governor and General Assembly accelerated:
 - Statutory commitment to fund 100% of actuarially determined contributions
 - Repayment of deferred contributions from 2010-2012 biennium
 - Fully repaid state plans saves \$26.5 million in interest
 - Significant infusion (\$193 million) into the teacher plan saves employers \$34 million by reducing future payments to the teacher plan
- Actions improve health of plans and avoid adding future costs to the plans
- Accelerating the statutory schedule for paying the actuarially calculated and Board-certified contribution rates estimated to save \$232 million in contributions over the next 20 years across all statewide plans